UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,365	08/24/2001	Radislav Alexandrovich Potyrailo	RD-28149	9524

7590 12/02/2003

Cynthia B Rothschild Esq
Kilpatrick Stockton LLP
1001 West Fourth Street
Winston Salem, NC 27101

EXAMINER	
STAFIRA, MICHAEL PATRICK	
ART UNIT	**PAPER NUMBER**
2877	

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/682,365	Applicant(s) POTYRAILO ET AL.	
	Examiner Michael P. Stafira	Art Unit 2877	AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *54-56* is/are allowed.

6)☒ Claim(s) *1-13,26-37,50,51 and 53* is/are rejected.

7)☒ Claim(s) *14-25,38-49 and 52* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. After further review it has been determined that the Notice of Allowance dated June 26, 2003 will be vacated in view of new grounds for rejection. Examiner apologies for any inconvenience this may cause the applicant.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-13,26-37,50, 51,53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan et al. ('404) in view of Brown et al. ('761) and in further view of C.O. Mork.

Claim 1, 27

Buchanan et al. ('404) discloses a light source (Col. 3, lines 45-46); a fiber optic transmission probe (Col. 3, lines 34-36), wherein said probe transmits at least one substantially monochromatic radiation (Col. 3, line 45) from said light source to irradiate a sample comprising at least one polymer and/or oligomer and collects light transmitted from said irradiated sample (Col. 6, lines 59-67); a spectrophotometer, wherein said spectrophotometer monitors radiation comprising UV/visible light absorbed by said irradiated sample (Col. 5, lines 26-41).

Buchanan et al. ('404) in combination with C.O. Mork substantially teaches the claimed invention except that it does not show a data analysis system for determining absorbance at one

predetermined reaction component. Brown et al. ('761) shows that it is known to provide a data analysis system for determining the predetermined reaction component (Col. 6, lines 31-58) for an optical probe apparatus. It would have been obvious to combine the device of Buchanan et al. ('404) in view of C.O. Mork with the data analysis of Brown et al. ('761) for the purpose of providing chemical identification and qualitative and quantitative concentrations from any type of in situ analysis, therefore increasing the amount of materials that can be examined and identified.

Buchanan et al. ('404) in view of Brown et al. ('761) substantially teaches the claimed invention except that it does not show the sample is a polycarbonate polymer. C.O. Mork shows that it is known to provide measurement of polycarbonate polymer (See Synopsis) for a measurement system. It would have been obvious to combine the device of Buchanan et al. ('404) in view of Brown et al. ('761) with the polycarbonate polymer of C.O. Mork for the purpose of being able to measure the concentration levels of the material, therefore allowing the user to determine when the amount of impurities have exceeded a certain level.

Claim 2, 28

Buchanan et al. ('404) further discloses the probe is maintained at a substantially constant temperature (Col. 5, lines 50-55).

Claim 3, 29

Buchanan et al. ('404) further discloses the probe comprises a high temperature probe for irradiating and collecting the light from the polymer (Col. 5, lines 50-55).

Claim 4, 30

Buchanan et al. ('404) further discloses the probe is immersed in the polymer sample (Col. 6, lines 58-67).

Claims 5-7, 31-33

Buchanan et al. ('404) further discloses said probe operates at a temperature in the range from 200.degree. C. to 400.degree. C or 250.degree. C. to 350.degree. C or 260.degree. C. to 330.degree. C. It is the position of the examiner that the reference of Buchanan et al. ('404) operates in a range of 200-300 degrees it falls in between the claimed temperature ranges.

Claim 8

Buchanan et al. ('404) in combination with Brown et al. ('761) and C.O. Mork discloses the claimed invention except for a filter between the light source and spectrophotometer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Buchanan et al. ('404) in combination with Brown et al. ('761) and C.O. Mork with the filter since it was well known in the art that filter are used to block a certain range of wavelengths, therefore allowing the device to measure components of a sample for a specific element.

Claims 9, 10, 36, 37

Buchanan et al. ('404) in combination with Brown et al. ('761) and C.O. Mork discloses the claimed invention except for a univariate or multivariate analysis. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Buchanan et al. ('404) in combination with Brown et al. ('761) and C.O. Mork with the univariate or multivariate since it was well known in the art that using different types of analysis

programs are used to block a certain range of wavelengths, therefore allowing the device to measure components of a sample for a specific element.

Claim 11-13, 34, 35

Buchanan et al. ('404) in view of Brown et al. ('761) substantially teaches the claimed invention except that it does not show the sample is a polycarbonate polymer molten. C.O. Mork shows that it is known to provide measurement of polycarbonate polymer (See Synopsis) for a measurement system. It would have been obvious to combine the device of Buchanan et al. ('404) in view of Brown et al. ('761) with the polycarbonate polymer of C.O. Mork for the purpose of being able to measure the concentration levels of the material, therefore allowing the user to determine when the amount of impurities have exceeded a certain level.

Claim 26, 53

Buchanan et al. ('404) further disclose software code is used in a Raman spectrometric apparatus (Col. 5, lines 27-40).

Claim 50

Buchanan et al. ('404) further discloses the component is measured during the production of the polymer (Col. 6, lines 57-67).

Claim 51

The reference of Buchanan et al. ('404) further discloses the monitoring of light absorbed is performed on combinatorial libraries of samples (Col. 3, lines 35-36).

Allowable Subject Matter

4. Claims 54-56 are allowed over the prior art of record.

5. Claims 14-25, 38-49,52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 54-56, the prior art fails to disclose or make obvious a method of real time monitoring of molten polycarbonate composition during production having the step of correlating the light absorbed by the irradiated sample to levels of fries products, branched Fries product, and phenolic end groups, and in combination with the other recited limitations of claim 54-56.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 703-308-4837. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 703-308-4881. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Michael P. Stafira
Primary Examiner
Art Unit 2877

November 18, 2003